The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SCOTT E. JOHNSTON

Appeal No. 2002-1520
Application No. 09/312,992

ON BRIEF

Before STAAB, McQUADE, and NASE, Administrative Patent Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 to 9, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellant's invention relates to spirally formed pipe and more particularly to larger sizes than have been produced in the past (specification, p. 1). Claims 1, 5 and 9 are representative of the subject matter on appeal and read as follows:

> 1. A spirally formed pipe, comprising an elongated strip of ductile material formed into joined, adjacent helical convolutions, having a diameter larger than 15 feet.
>
> 5. A spirally formed pipe, comprising an elongated strip of ductile material formed into joined, adjacent helical convolutions, reshaped into an arch shape, having a beginning diameter above 144 inches.
>
> 9. A spirally formed pipe larger than 144 inches in diameter before reshaping into an arch shape.

Claims 1 to 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Handbook of Steel Drainage[1].

Claims 1 to 4 stand rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Holcomb[2].

[1] "Handbook of Steel Drainage & Highway Construction Products," American Iron and Steel Institute, 1983, pp. 6-65.

[2] U.S. Patent No. 4,852,616, issued August 1, 1989.

Claims 5 to 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Holcomb in view of the Handbook of Steel Drainage.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the answer (Paper No. 14, mailed December 18, 2001) for the examiner's complete reasoning in support of the rejections, and to the amended brief (Paper No. 13, filed October 12, 2001) and reply brief (Paper No. 15, filed January 15, 2002) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

The anticipation rejection based on the Handbook of Steel Drainage

We will not sustain the rejection of claims 1 to 9 under 35 U.S.C. § 102(b) as being anticipated by the Handbook of Steel Drainage.

Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). When the claimed invention is not identically disclosed in a reference, and instead requires picking and choosing among a number of different options disclosed by the reference, then the reference does not anticipate. Thus, the invention must have been known to the art in the detail of the claim; that is, all of the elements and limitations of the claim must be shown in a single prior reference, arranged as in the claim. See Karsten Mfg. Corp. v. Cleveland Gulf Co., 242 F.3d 1376, 1383, 58 USPQ2d 1286, 1291 (Fed. Cir. 2001); Akzo N.V. v. International Trade Commission, 808 F.2d 1471, 1480, 1 USPQ2d 1241, 1245-46 (Fed. Cir. 1986), cert. denied, 107 S.Ct. 2490 (1987); In re Arkley, 455 F.2d 586, 587-88, 172 USPQ 524, 526 (CCPA 1972).

The Handbook of Steel Drainage describes various embodiments of corrugated steel conduits in a wide range of sizes and shapes (e.g., round, arches, etc.). The Handbook of Steel Drainage teaches (p. 39) that thin, wall, lightweight, shop-fabricated corrugated steel pipe (i.e., spirally formed pipe) can have a diameter to 96 inches and larger. The Handbook of Steel Drainage then teaches (p. 39) that structural plate corrugated steel pipe (i.e., non-spirally formed pipe) that is field assembled can have a diameter beyond 25 feet. The Handbook of Steel Drainage further teaches (p. 40) that for lock seam corrugated steel pipe the corrugations and seams run helically with diameters to 120 inches.

Claims 1 to 4

The Handbook of Steel Drainage does not describe a spirally formed pipe comprised of an elongated strip of ductile material formed into joined, adjacent helical convolutions, having a diameter larger than 15 feet in a single embodiment. Thus, we find ourselves in agreement with the position set forth by the appellant in the briefs that claims 1 to 4 are not anticipated by the Handbook of Steel Drainage. Accordingly, the decision of the examiner to reject claims 1 to 4 under 35 U.S.C. § 102(b) as being anticipated by the Handbook of Steel Drainage is reversed.

Claims 5 to 8

The Handbook of Steel Drainage does not describe a spirally formed pipe, comprising an elongated strip of ductile material formed into joined, adjacent helical convolutions, reshaped into an arch shape, having a beginning diameter above 144 inches in a single embodiment. Thus, we find ourselves in agreement with the position set forth by the appellant in the briefs that claims 5 to 8 are not anticipated by the Handbook of Steel Drainage. Accordingly, the decision of the examiner to reject claims 5 to 8 under 35 U.S.C. § 102(b) as being anticipated by the Handbook of Steel Drainage is reversed.

Claim 9

The Handbook of Steel Drainage does not describe a spirally formed pipe larger than 144 inches in diameter before reshaping into an arch shape in a single embodiment. Thus, we find ourselves in agreement with the position set forth by the appellant in the briefs that claim 9 is not anticipated by the Handbook of Steel Drainage. Accordingly, the decision of the examiner to reject claim 9 under 35 U.S.C. § 102(b) as being anticipated by the Handbook of Steel Drainage is reversed.

The anticipation and obviousness rejection based on Holcomb

We will not sustain the rejection of claims 1 to 4 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Holcomb.

Holcomb's invention relates to a pipe of sheet steel or the like, fabricated of a single strip of metal, and which is provided with spirally extending corrugations. Between the corrugations are flat portions, which are closer to the axis of the pipe than are the crests of the corrugations. Each corrugation comprises a circular arc, and an inclined tangential portion, the tangential portions each being connected by a concave circular arc with a flat portion which lies closer to the axis of the pipe than the crests of the corrugations. In Table A (column 4), Holcomb teaches pipe diameters between 12 and 60 inches. In Table B (column 5), Holcomb teaches pipe diameters between 48 and 108 inches. Holcomb provides (column 5, line 64, to column 6, line 2) that

> [t]he herein disclosed pipes are significantly less expensive than are standard pipes currently manufactured, as exemplified in the above noted Handbook of Steel Drainage & Highway Construction Products. The pipes in accordance with the present invention are entirely suitable for many installations, particularly where the anticipated fill height and load factors, which exert compressive loads on the pipe, are significantly less than the maximum for which the standard corrugated steel pipes are suitable.

Lastly, in the Background of the Invention, Holcomb states (column 2, lines 56-64) that

> [s]pirally wound steel pipe is widely used for culverts, storm sewers, subdrains, spillways, underpasses and service tunnels. According to Handbook of Steel Drainage and Highway Construction Products, published by American Iron and Steel Institute (Second Edition, 1971), round or circular corrugated steel conduits are in common use for such purposes for medium and high fills, or trenches, and range in diameter from six inches to 21 feet.

Holcomb does not describe or suggest a spirally formed pipe comprised of an elongated strip of ductile material formed into joined, adjacent helical convolutions, having a diameter larger than 15 feet. Thus, we find ourselves in agreement with the position set forth by the appellant in the briefs that claims 1 to 4 are not anticipated or rendered obvious by Holcomb. Accordingly, the decision of the examiner to reject claims 1 to 4 under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Holcomb is reversed.

The obviousness rejection based on Holcomb and the Handbook of Steel Drainage

We will not sustain the rejection of claims 5 to 9 under 35 U.S.C. § 103 as being unpatentable over Holcomb in view of the Handbook of Steel Drainage.

While the combined teachings[3] of Holcomb and the Handbook of Steel Drainage may have suggested to reshape Holcomb's spirally wound corrugated pipe into an arch shape in view of the teachings of the Handbook of Steel Drainage, this modification of Holcomb would not have arrived at the subject matter of claims 5 to 9. Specifically, the combined teachings of Holcomb and the Handbook of Steel Drainage do not suggest either (1) a spirally formed pipe comprising an elongated strip of ductile material formed into joined, adjacent helical convolutions, reshaped into an arch shape, having a beginning diameter above 144 inches as recited in claims 5 to 8, or (2) a spirally formed pipe larger than 144 inches in diameter before reshaping into an arch shape as recited in claim 9. Accordingly, the decision of the examiner to reject claims 5 to 9 under 35 U.S.C. § 103 as being unpatentable over Holcomb in view of the Handbook of Steel Drainage is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 to 9 under 35 U.S.C. § 102(b) as being anticipated by the Handbook of Steel Drainage is reversed; the decision of the examiner to reject claims 1 to 4 under 35 U.S.C. § 102(b) as being

[3] The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Holcomb is reversed; and the decision of the examiner to reject claims 5 to 9 under 35 U.S.C. § 103 as being unpatentable over Holcomb in view of the Handbook of Steel Drainage is reversed.

REVERSED

LAWRENCE J. STAAB
Administrative Patent Judge

JOHN P. McQUADE
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

) BOARD OF PATENT
) APPEALS
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